Laser measurement system aids alignment of strand guide rollers in casting plants

- Measuring accuracy of ± 0.07 mm

Simetal Opal from Siemens Metals Technologies provides operators of continuous casting plants with an integrated laser measurement system for exact alignment of strand guide rollers. The system achieves high measuring accuracy of ± 0.07 mm, even under the hostile ambient conditions prevailing in a steelworks. Simetal Opal registers the strand guide rollers' current positions and, after quality control, saves the measured data in a log file. An intuitive user interface and automated measurement sequences make it easy to use locally and reduce measuring times. Saved measurements serve as the basis for condition-based maintenance of the strand guide system, which cuts maintenance costs. The system can be integrated into both new and existing plants.

Nowadays, operators of continuous casting systems have to offer a wide portfolio of steel grades and cast cross-sections, while ensuring reproducible product quality. At the same time, system components have to achieve a long life with minimum maintenance requirements. Precise strand guidance is an essential prerequisite for this, calling for a fast and simple solution for alignment of the guide rollers.

The Simetal Opal system developed by Siemens for this purpose uses a high-precision rotation laser, whose beams embrace a plane in space. This is used as the reference point for measuring the strand guide rollers. A laser receiver with an integrated microprocessor logs the measured values and transfers them wirelessly to a control unit where they are analyzed and backed up automatically with the aid of the specially designed Simetal Opal software. For each measurement, the system generates a test report that can be archived. This permits a precise comparison of
target and actual positions. The system also features intelligent measured data management, which can be linked to monitoring the plant's status. This helps the plant operator to observe the required maintenance intervals and creates the foundation for a condition-based maintenance strategy. Simetal Opal is part of the higher-level Siemens condition monitoring concept for continuous casting systems.

Siemens already uses Simetal Opal in its own production of strand guide components at the Siemens location in Shanghai.

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A press picture is available at http://www.siemens.com/mt-picture/IMT201301336

The laser-based Simetal Opal measurement system by Siemens supports operators of continuous casting plants in the fast and precise alignment of strand guide rollers.

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